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TRANSPORTATION IN CHINATOWN

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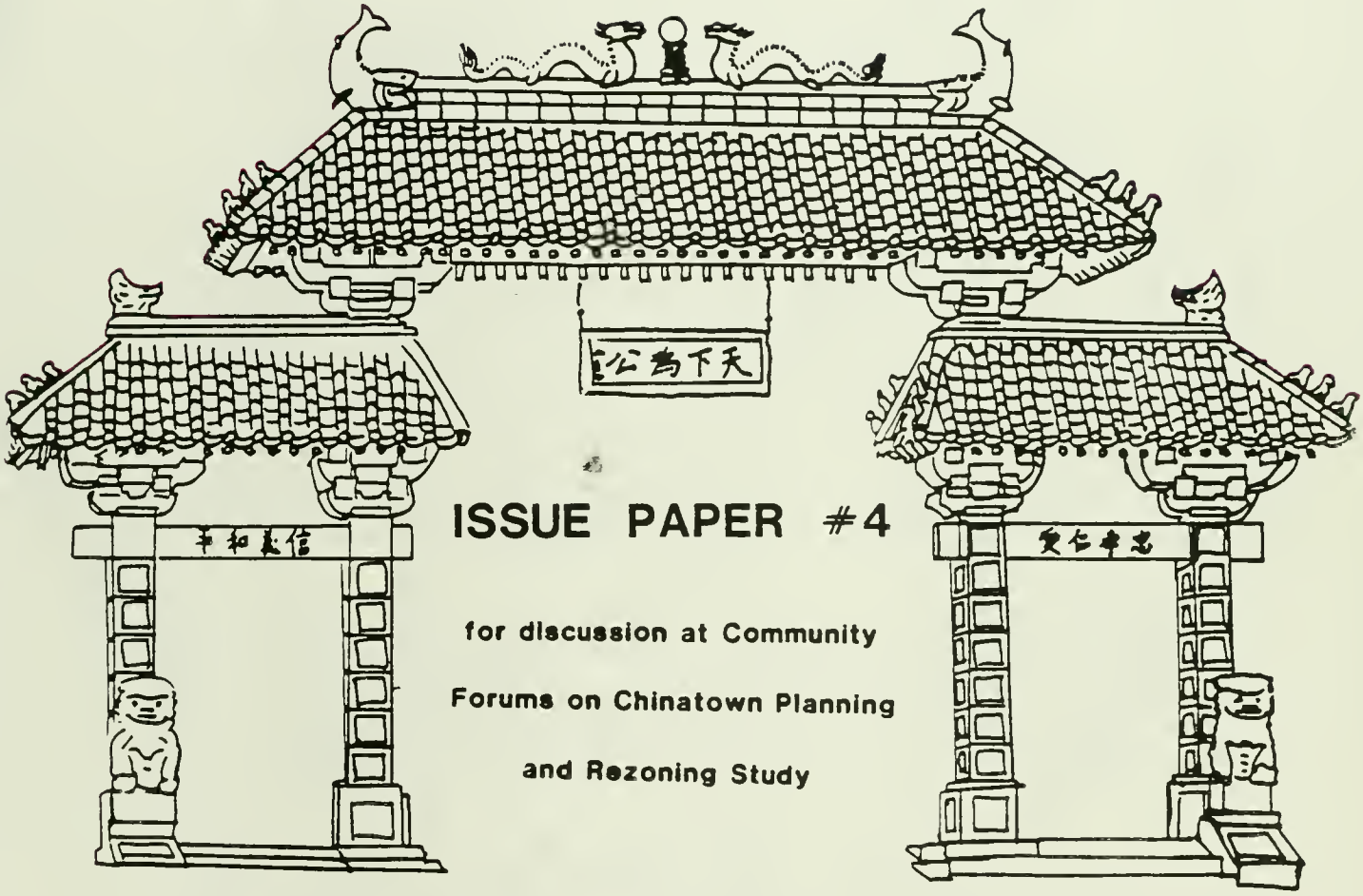


ISSUE PAPER #4

for discussion at Community

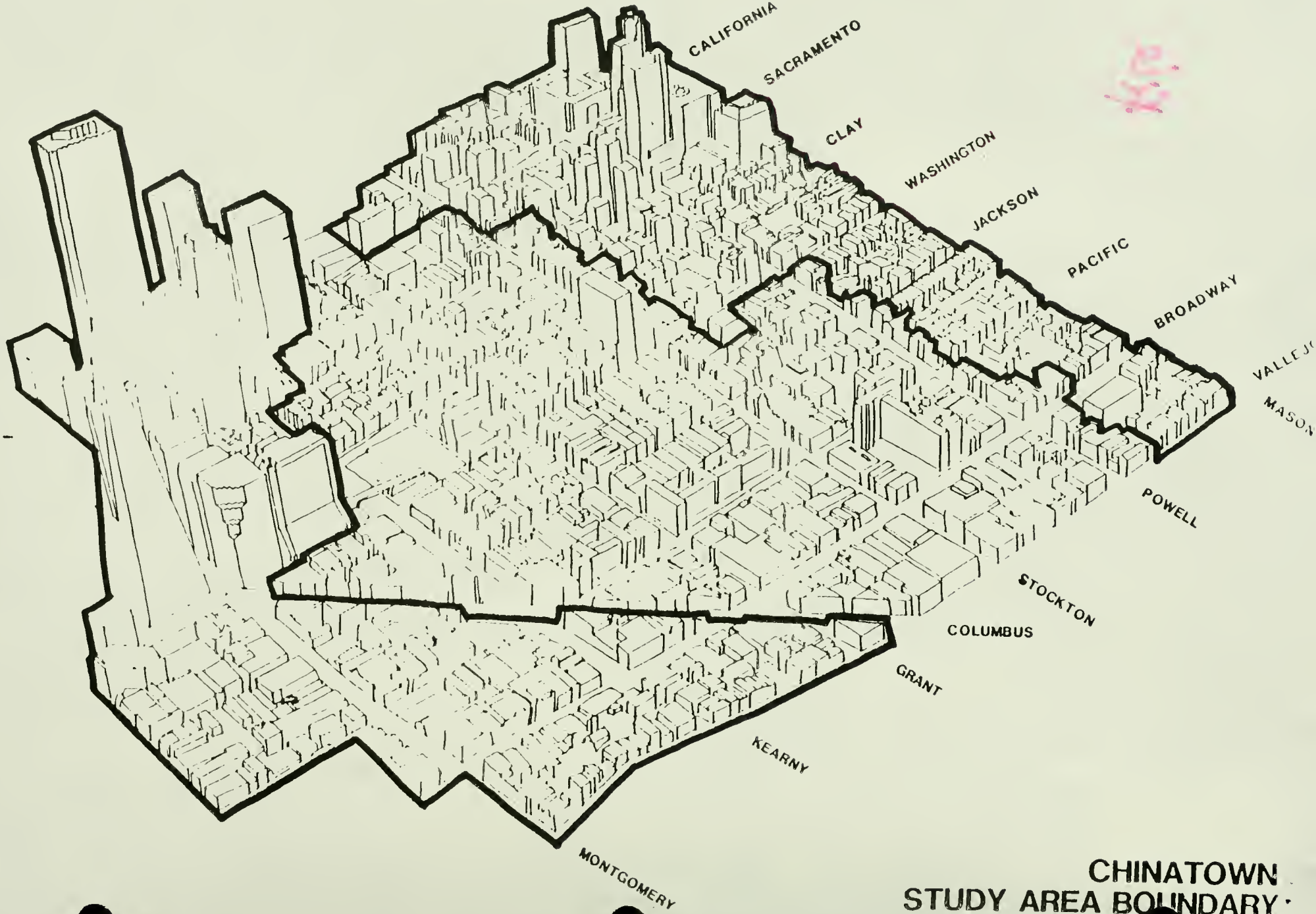
Forums on Chinatown Planning

and Rezoning Study

prepared by

San Francisco Department of City Planning

DECEMBER, 1984



CHINATOWN
STUDY AREA BOUNDARY

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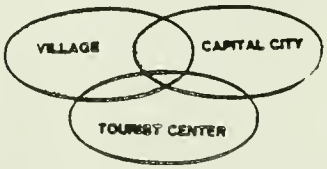
PREFACE

Chinatown's streets and sidewalks often serve as one large walking open market place. Walking is a principal form of transportation for both Chinatown's residents and visitors. Probably some of the attraction of shopping in Chinatown is lively jostling with shoppers and residents on crowded sidewalks. The capacity of the streets to contain and service the flow of pedestrians, pedicabs, motor vehicles, buses, trolley coaches and trucks is often strained. Fortunately the daily and weekly rhythms and peak times of Chinatown's traffic pattern differ from those of the nearby Downtown for which Broadway, Stockton and Kearny Streets are conduits. There are times, however, of overlapping congestion.

As described in earlier issue papers for the rezoning study, Chinatown has three functions which are reflected in different kinds of traffic. Chinatown is a residential village, a capital city for Bay Area Chinese population and a major visitor attraction. Each of these concerns results in a different set of transportation needs.



In addition, Broadway, Stockton Street and Kearny Street serve as major commuter corridors for a number of downtown employees. The functional needs of Chinatown itself and vehicular access needs in relation to downtown can be in conflict with one another. The policy directions in this fourth issue paper address these divergent transportation needs arising from Chinatown's unique character and location.

I. SUMMARY

The first part of this paper reviews San Francisco transportation policy and programs relating to Chinatown. These include the Tudor Chinatown Core Area Traffic Circulation Study (1979); the Transportation Element of the Master Plan (1982); the annually updated MUNI Five Year Plan and the Downtown Plan (1984). Related programs include the upgrading of alleyways and the establishment of a Transit Impact fee. Both the 1979 Tudor Chinatown Traffic Study and the Alleyways program were funded by federal Community Development Block Grants (CDBG).

Drawing on these materials, the next section of the paper examines Chinatown transportation facilities and issues related to these facilities. A fourth section of the paper looks and the different needs of Chinatown residents, Chinatown visitors and shoppers and people who work in Chinatown.

In the final section of the paper, potential policy directions are identified. Policies which can be implemented by zoning are noted. Other aspects of transportation policy are suggested for consideration as changes to the Master Plan or existing transportation programs.

II. TRANSPORTATION POLICY AND PROGRAM RELATED TO CHINATOWN

A. TRANSPORTATION ELEMENT AND DOWNTOWN PLAN

TRANSPORTATION ELEMENT

The Transportation Element of the San Francisco Master Plan which sets the framework for transportation policy in Chinatown was adopted in 1972 and last amended by the Planning Commission in 1982. It is organized into sections representing the major components of San Francisco's transportation system including transit, car and trucks, pedestrians, the Downtown and parking. The Element has two general goals:

> Meet needs of all residents and visitors for safe, convenient and inexpensive travel within San Francisco and between the city and other parts of the region.
>
> Use the transportation system as a means for guiding development and improving the environment.

The first goal is partially met in Chinatown. Walking, a primary means of transportation, is inexpensive and convenient. Transit, another important means of travel, is subsidized in a variety of ways. Riders may buy a $20 "fast pass" for a month of unlimited riding. Senior citizens (65 years and older) can ride for five cents or on a monthly Discount Pass costing $2.50. Due to traffic congestion and crowding, transit service is not always convenient. Parking in Chinatown in neither convenient or inexpensive.

The second goal, advocating the use of the transportation system to guide development, is difficult to achieve when the street patterns are already as firmly established as they are in Chinatown. However, modifications in the direction of travel (one way streets), changes in the frequency of transit service, installation of transit lanes, center street transit guideways or shallow subways, alleyway improvements and changes in parking arrangements all can affect and ennance development patterns. An example is the one way northbound direction on Grant Avenue helping draw visitors from the retailing areas of downtown to Chinatown and North Beach. Such transportation modifications should complement and reinforce the preferred development pattern identified through the Chinatown Planning and Rezoning Study.

Mass Transit According to the Transportation Element, Chinatown is one of the areas of the city where mass transit has a policy priority because (1) it is an area where there are many residents of limited means who don't own or drive automobiles and (2) Chinatown is close to Downtown.

An important means for the support of mass transit is the creation of transit preferential streets. On these streets, interference with transit vehicles may be reduced by establishment of exclusive bus lanes, restrictions on automobile movements which conflict with buses and prohibition of auto-oriented (drive in) land uses.

As shown on Map 1, the Master Plan presents a hierarchy of street classifications intended to provide specialized functions (auto and truck movement, transit movement, pedestrian movement) for particular streets. This hierarchy is not entirely operational in Chinatown because the designated travel modes overlap.

Transit Preferential Streets in Chinatown include Stockton, Powell, Broadway, California, Sacramento, Clay Streets and Columbus Avenue. Stockton Street, for example, has curb platforms for trolley bus loading. California and Powell are Transit Preferential streets by virtue of the cable car slots.

Primary Vehicular Streets The Transportation Element contains a policy to establish thoroughfare streets (major routes for motor vehicles) consistent with the character and use of adjacent land.

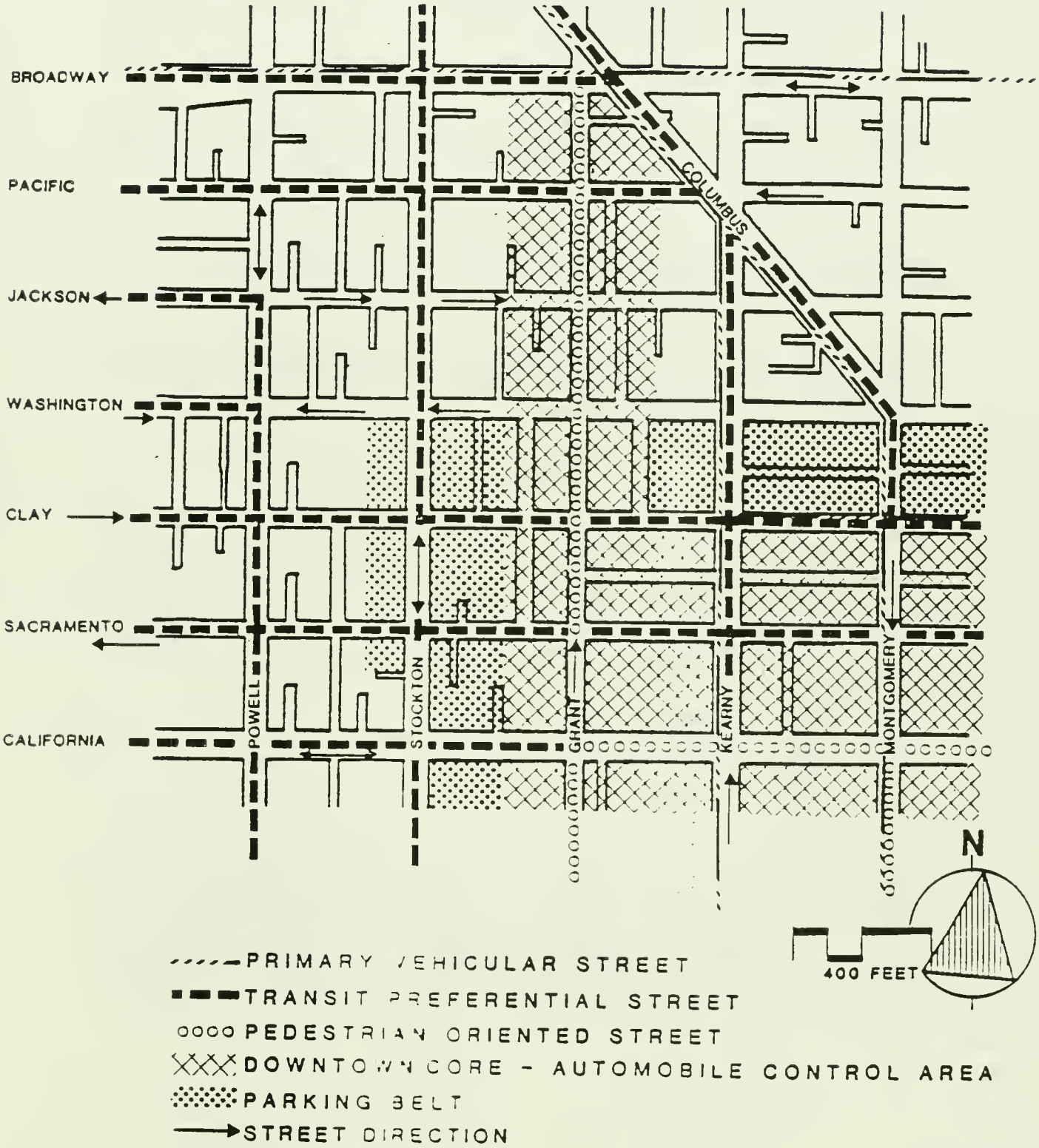
Columbus Avenue is designated as a major thoroughfare -- a route of city-wide significance distributing traffic from the freeways and other districts. Within Downtown and near Downtown, Broadway, Kearny and Montgomery are also considered as primary vehicular streets. Washington and Clay, east of Kearny are similarly designated.

Generally only streets on the edges of the Chinatown Core, rather than its center, are designated as primary for vehicles. Even though they are primary vehicular streets, Broadway, Kearny and Montgomery all have bus routes and many activities which attract pedestrians.

Pedestrian Oriented Streets The Transportation Element stresses priority for walking for parts of the city, such as Chinatown, where commercial and residential development is highly concentrated. The sidewalks of Pedestrian Oriented Street are to receive special treatment to make walking comfortable and pleasant. Grant Avenue is designated as a Pedestrian Oriented Street.

Parking Parking policies in the Transportation Element are concerned with preventing negative effects from new parking facilities on the livability of surrounding neighborhoods. To protect neighborhoods, strict criteria of need are established. The Element takes a wary view of new parking and its impacts by discouraging surface parking as an interim use. Joint or shared use during off-use times of already established private parking for institutions or business is also proposed. Preferential on-street parking for residents which has already been established by sticker programs for areas to the north and west of Chinatown, is also favored.

MASTER PLAN POLICIES IN CHINATOWN AREA



Map 1

DOWNTOWN PLAN

The Downtown Plan incorporated into the Master Plan November 29, 1984 builds on policies contained in the Transportation Element. Its transportation focus is on the moving of commuters in and out of downtown. Both Plans designate a "Core Auto Control Area" extending the length of Grant Avenue to Broadway and including Kearny and Montgomery Streets between Sutter and Clay. In the Auto Control Area, pedestrians, transit and service vehicles have priority use.

At the edge of the Auto Control Area a "Parking Belt" for short term parking serving Downtown is designated along Stockton and Clay.

The Downtown Plan provides for future feasibility study of a shallow subway (for electrified trolley coaches) running under Stockton Street through Chinatown similar to what is under construction in Downtown Seattle.

Three additional Pedestrian-Oriented Streets are added in the Downtown Plan: Columbus, Commercial Street between Clay and Washington, and Montgomery, north of California.

Zoning controls adopted with the Downtown Plan remove part of Chinatown south of Washington from C-3 "Downtown" parking controls. Thus permanent legislation will need to address commercial and residential parking standards in the Planning Code.

B. MUNI FIVE YEAR PLAN

The San Francisco Municipal Railway Short Range Transit Plan, 1984-1989, covers both immediate and longer term improvements to meet MUNI goals. These include: meeting transit demand, cost efficiency in operations and increasing convenience, dependability and comfort. The Plan notes that city-wide MUNI ridership has been increasing by 6% annually since the 1980-81 fiscal year. Chinatown is an area of particularly intensive transit use and is served by diesel and electrified buses and cable cars.

Some of the improvements related to Chinatown proposed in the MUNI Five Year Plan have already been implemented: The #30 AX, BX Stockton lines use articulated motor coaches (buses that bend in the middle). The Public Utilities Commission has increased contracting with providers of paratransit trips.

Longer term programs under study include: (1) purchase of articulated trolley coaches to increase capacity on the #30 Stockton line which would represent a 50% increase of capacity for that line; (2) creation of a new #20-Columbus line via Folsom, Fremont, Front, Sacramento, Kearny and Columbus to North Point incorporating parts of the #15, #30 and #41 lines; (3) study of electrification (possibly light rail) for the existing #15 motor coach line; (4) study of the Stockton/Columbus corridor for conversion to light rail.

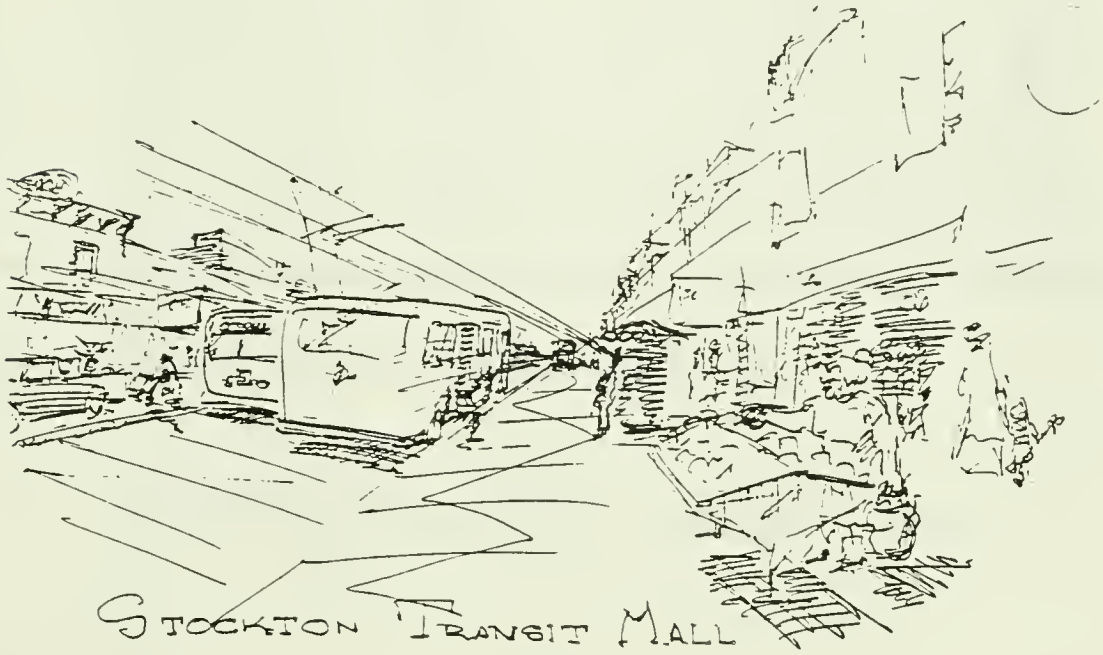
C. CHINATOWN CORE CIRCULATION STUDY

The Chinatown Core Area Traffic Circulation Study was published in 1979 through the Department of City Planning as a resource document for identifying transportation needs and recommending policies and a set of projects for implementation with city, state and federal funding sources. Production of the study had been urged by T.R.I.P., a Chinatown transit advocacy group first formed during the transit strike of 1976. The principal consultant for the study was Tudor Engineering which was assisted by both citizens advisory and technical committees.

The significant policy recommendations of this study concerned the concept of a preferential vehicle program -- "the designated preferential vehicle area should be viewed as a pedestrian activity and shopping area in which only high priority vehicles will be allowed during peak traffic hours". Traffic priorities would be applied to commercial and transit vehicles, emergency vehicles and other "essential" vehicles. Low priority would be given to through private vehicles. The coverage suggested was an area roughly bounded by Stockton, Pacific, Grant and Clay Streets. The study also included a separate and positive evaluation of a transit commercial street (no private automobiles) for the Stockton corridor.

Short term physical improvements recommended in the study included: (1) treatment of six problem intersections; (2) passenger loading platforms, lane markings and improvements to the tunnel for the Stockton corridor; (3) construction of pedestrian activity areas on Grant, Jackson and Washington Street; (4) improved signs for parking facilities; (5) more personnel for parking and traffic enforcement and (6) a "parking accommodation" program featuring shuttle buses (park and ride) connecting Chinatown with peripheral parking garages or lots. The intersection and Stockton corridor projects have been implemented.

The Tudor study included background and special survey data which the Chinatown Planning and Rezoning Study is updating, providing an opportunity to look at changes over a five year time span.



D. ALLEYWAYS

A December, 1980 study prepared by Mui Ho, as a project of the Chinatown Neighborhood Improvement Resource Center in cooperation with the Chinatown Better Parks and Recreation Committee, covered Chinatown Alleyways: Their Potential. Their Future. The report recognized that alleyways form a vital connective network for pedestrians and advocated enhancing and modifying them better to serve as open space resources.

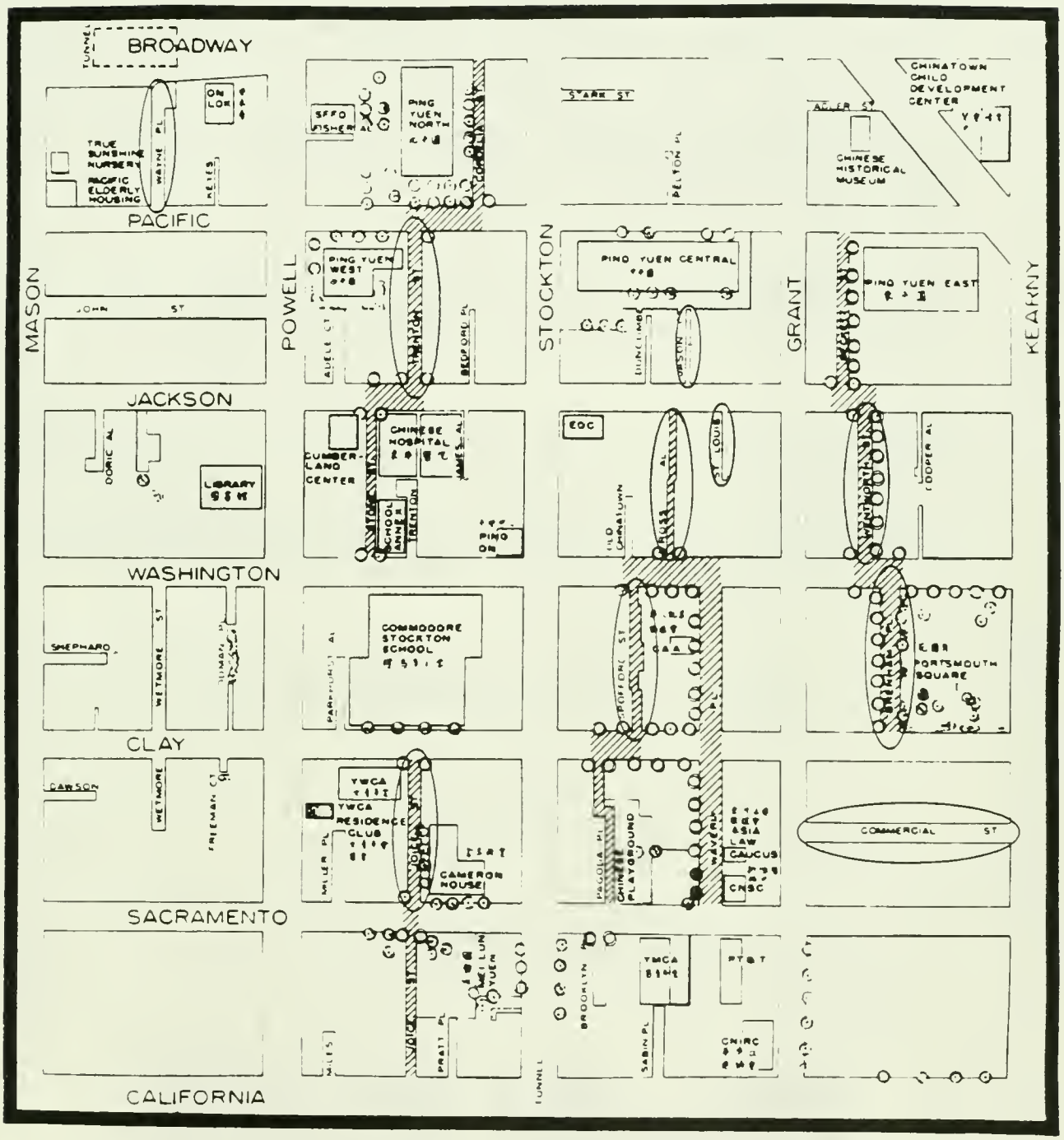
Mui Ho traced the history of alleyways to the pre-earthquake containment of Chinese population into a six block area and the division of these blocks into small lots with interior passageways. She said alleyways were more numerous and connected before the 1906 earthquake. After rebuilding, the pattern became more fragmented.

Mui Ho recommended that the alleys be improved in a manner to again become "overtly connected pedestrian havens" and to "fit into a master plan for the entire Chinatown Core area, of which a primary goal is the improvement of the pedestrian environment.

Design features proposed for alleyways included special paving, greenery in planters, seating, lighting and bollards. Since 1980, there have been a number of alleyway improvements undertaken with Community Development Block Grants as a funding source. The Chinatown Neighborhood Improvement Resource Center assists in initial project design based on community preference and helps in forming alleyway associations for each alley. CNIRC has also organized an overall Chinatown Alley Improvement Association as an umbrella organization to raise money for maintenance. Maintenance is now done on a voluntary basis by volunteers for each alley, by persons directed by the courts ("pretrial diversion") and by the City on special request.

Initially Ross, Spofford and Hang Ah alleys were upgraded under the auspices of the Department of Public Works Streets and Highways Division. Beginning in 1983, projects have been designed through DPW Park Engineering including Trenton and St. Louis (which are almost completed). Jason, Trenton II (a mini park for Ping Yuen), Wayne, Wentworth and Joice are now in the process of being completed. Projects to be funded under the 1985 Community Development Block Grant program are Brenham Place (pedestrian safety improvements) and Commercial Street between Grant and Kearny (brick repaving and sidewalk widening). Wayne and Commercial which were not originally included in the 1980 study are now CDBG projects. Improvements to Commercial Street, east of Kearny are being undertaken and organized by the developers of a large office project at 505 Montgomery.

ALLEYWAY PROGRAM



PROPOSED IMPROVEMENT

FUNDED THROUGH BLOCK GRANT

Source : MUI HO

Map2

E. TRANSIT IMPACT FEE

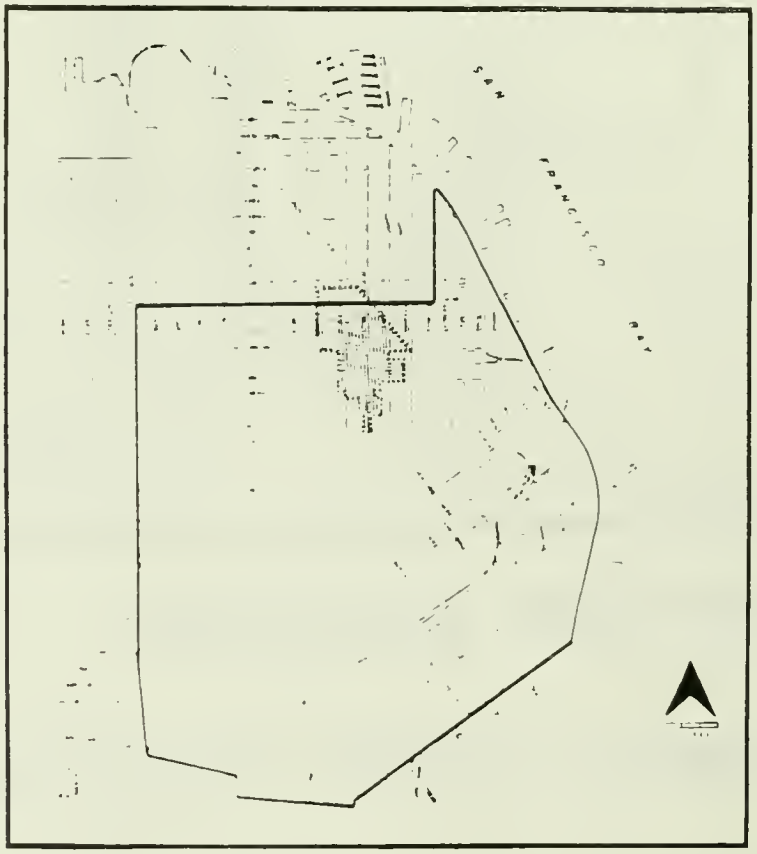
The Transit Impact Development Fee Ordinance was enacted May, 1981. The purpose of the ordinance is to require developers of new office buildings in a defined district in downtown San Francisco, "to pay a fee which is related directly to the incremental financial burden imposed upon the Municipal Railway (MUNI) in serving the new riders generated by those new buildings over the life of those buildings. The Chinatown Study Area up to the south side of Broadway is within the area covered by this requirement. The ordinance does not apply to retail or residential space, only to office uses.

The fee is to be collected by the City at the time a Certificate of Final Completion and Occupancy is issued for an office building. The fee is set at $5.00 per square foot and is based on the incremental cost of providing additional transit service over 45 years, the assumed life of a building.

The fee initially was challenged as being an unlawful special tax under Proposition 13, but a recent Superior Court decision held the ordinance to be valid.

The effect of the fee on development in Chinatown is limited because it is charged to office development only. Additional major office space does not have as high a priority to the Chinatown community as residential, retail and service uses.

TRANSIT IMPACT FEE AREA MAP



Transit Impact Fee Area

Chinatown Study Area

Map 3

III. TRANSPORTATION FACILITIES AND ISSUES

This section of the paper reviews Chinatown transportation facilities critically. Do they work? What are the problems and issues associated with them? . Should existing policies or programs be changed?

A. PEDESTRIANS

The 1979 Chinatown Core Circulation Study recommended "pedestrian movements should, to the extent practical, be given the highest priority in transport facility development". The 1979 study notes that Chinatown's sidewalks are used by a high proportion of older pedestrians who may have slower perceptions of traffic hazards.

Although the Downtown Plan gives emphasis to speedy, freeflowing pedestrian movements, the pedestrian needs of local population in Chinatown may dictate other priorities. These needs are for access to shopping, social activities, recreation, residences., clubs and associations and bus services.

Pedestrian Travel The Chinatown Core Circulation Study resulted in some improved intersection design for identified problem-intersections on both Columbus Avenue and Broadway. Other recommendations for removal of sidewalk obstructions and construction of activity platforms (expansion of sidewalks, Grant, Jackson, Washington) were not implemented. The relative narrowness of these streets was one of the problems.

Despite disruptions of the cable car reconstruction project and relatively little change in land use, the general conclusion can be drawn that pedestrian travel has increased as much as 8% over the last five years. Detailed "level of service" computations relating pedestrian counts to effective widths of sidewalks for a number of Chinatown locations have not yet been completed. Observation suggests impeded travel is fairly frequent. The number of pedestrians increases substantially during middays, both on weekdays and weekends. Although 1984 weekend travel was not surveyed, historic data suggest weekend pedestrian volumes are somewhat higher because of the combination of nonlocal shoppers, tourists and local residents.

Vending activities can obstruct sidewalks. Sidewalk and truck vending is a tradition of Chinatown and it adds color, character and interest. The restriction of these activities could be more of a loss than a positive benefit to the community.

Open Store Fronts An emerging pattern in Chinatown, especially along Stockton Street are store fronts fully open to the sidewalk and stores with interior arcades. Sidewalk openings, setbacks and arcades are all features that help give more space to pedestrians.

On the other hand, store front displays may overspill on to sidewalks and leave relatively little space for pedestrians. The City has a Storefront Display Ordinance which is not strictly enforced.

Alleyways Parking conflicts and maintenance are issues encountered in implementing the Alleyways program. The parking permitted in some alleys, for example, Wentworth and Waverly, conflicts with making these alleys havens for pedestrians. Vehicular traffic conflicts with the open space aspects of the alleys. Closure during certain hours is a possible solution, but difficult for businesses receiving deliveries at random times of the day.

Continuous maintenance is another issue. Volunteer efforts are not fully successful and DPW proves some clean up on a request basis. Problems with supervision of welfare recipient street sweepers and lack of small scale mechanical street sweeping equipment are cited by DPW as barriers to normal services.

Policy Implications

1. Volume and density of people on sidewalks in Chinatown is among the highest in the City especially on the north south Street, Grant and Stockton.

2. Space available to pedestrians is at a premium.

3. Merchants may use part of the sidewalk or they may add to sidewalk space through opening storefronts to streets.

4. The Alleyway Program, already partially implemented faces problems of parking, maintenance and connection into a overall system or network.

Pedestrian Issues

1. Is periodic congestion (middays) a severe problem? Are there some positive aspects to crowded sidewalks?

2. When are sidewalk widenings justified? Which streets should have wider sidewalks?

3. Should new stores be required to provide some forms of pedestrian space?

4. Should the Storefront Display ordinance be more strictly enforced?

5. Should the alleyway program be strengthened by more restrictions on parking, better city cleaning and better linkages between the improved alleys?

B. TRANSIT: MUNI ROUTES SERVING CHINATOWN

Map 4 shows the San Francisco Municipal Railway (MUNI) motorcoach, trolley and cable car routes serving Chinatown. Service is provided by eight MUNI bus and trolley routes (#1, #15, #41, #30, #30X, #30AX, #30BX, #83) and two cable car lines (#59 and #60). MUNI operates a total of 79 lines throughout the city. Line #30, the major north-south line, is scheduled to run on Stockton Street every three minutes, 9 am to 4 pm during weekdays and every four minutes, 9 am to 4 pm on Saturdays. The average daily number of passengers is 43,000. Line #15, another north-south line, has a scheduled frequency of 6 minutes, 9 am to 4 pm weekdays and 8 minutes on Saturdays. Cable car frequencies range from 6 to 10 minutes thoroughout the day.

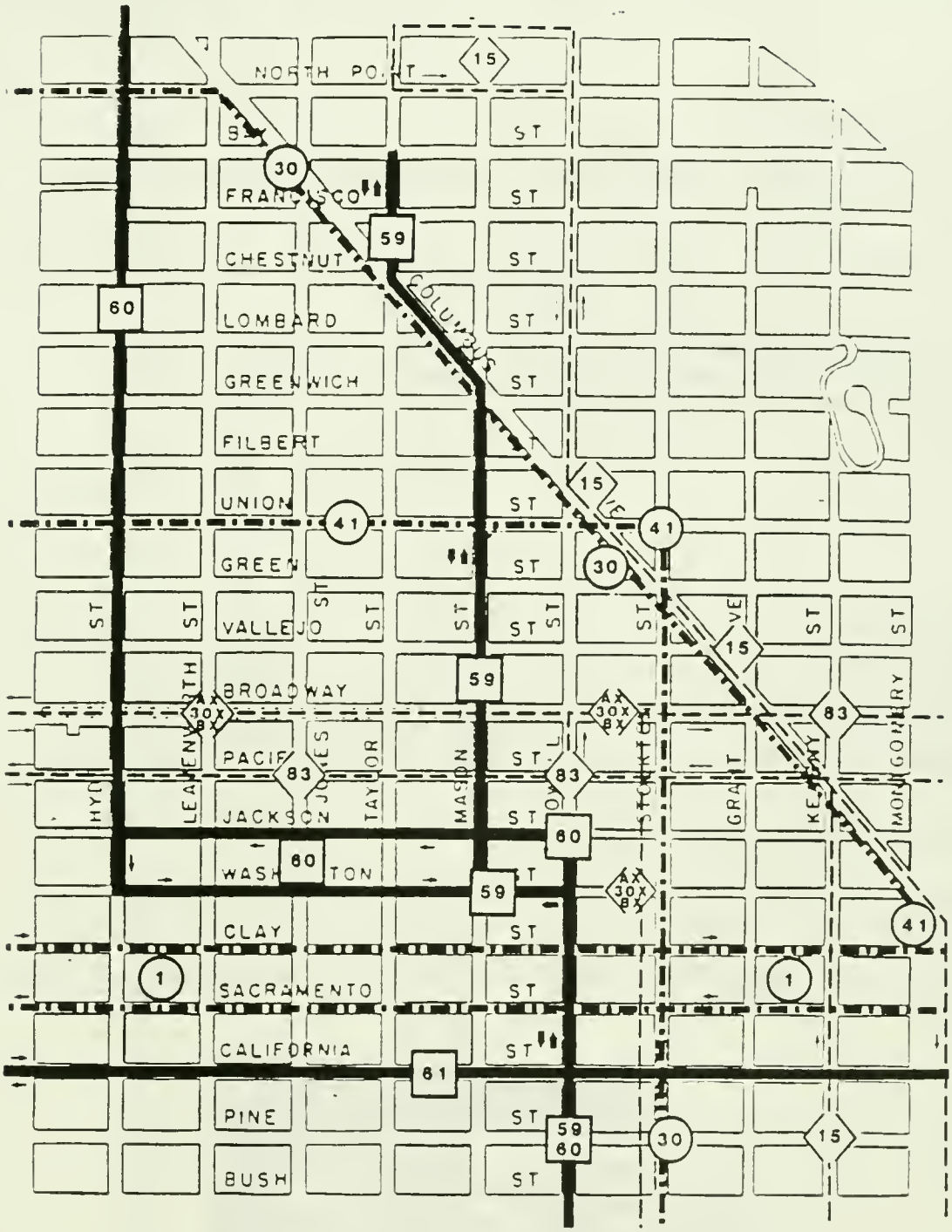
Lines #1 and #83 are the major east-west lines. Line #1 increases in scheduled frequency to 3 minutes during commute hours on weekdays, and is from six to ten minutes during other parts of the day. The average number of daily passengers on Line #1 is 28,000. The 83 line has a scheduled frequency of ten minutes from 9 am to 4 pm and has the lowest average daily number of passenger of these four lines (3,000).

During peak commute hours (7 - 9 am and 4 - 6 pm) the #1 and #30 are very crowded, normally exceeding 125% of their seating capacities. The #1 and #30 lines average a 1.4 load factor (40% as many people as are seated are standing) while the #15 is slightly less crowded.

Bus service problems for Chinatown are most serious during the commute hours. However, in recognition of the heavy demand on Saturday and Sundays bus frequencies have been increased to match weekday-non commute times. Another transit problem for some of Chinatown's population is lack of Chinese signs on buses, thus causing difficulty in transferring or navigating throughout the city.

At the present time, MUNI service to Chinatown functions as both "long haul" commuter and local (service within Chinatown) routes. There appears to be an opportunity for more differentiation of longer distance and short trip routes.

TRANSIT ROUTES IN CHINATOWN



MOTOR COACHES

15 Third

AX 30X BX Stockton Express

83 Pacific

TROLLEY COACHES

1 California

30 Stockton

41 Union

Cable Car Line

59 Powell/Mason

60 Powell/Hyde

61 California

Map 4

Policy Implications

1. Transit lines originating outside Chinatown are often full when they reach Chinatown.

2. A number of lines serve Chinatown but none carry passengers in a loop route exclusively within Chinatown.

3. If local and commuter service were differentiated, the transfer points between them would present special opportunities for development as transit centers.

Transit Issues

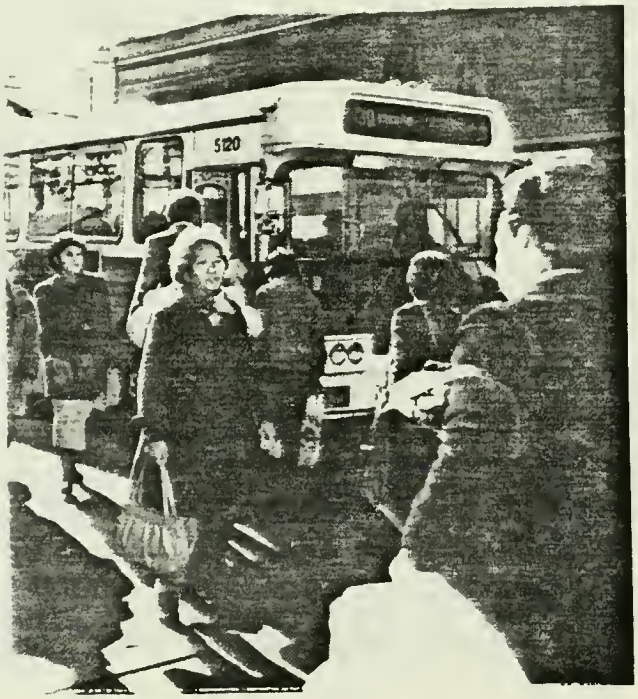
1. What sort of transit service improvements does Chinatown need?

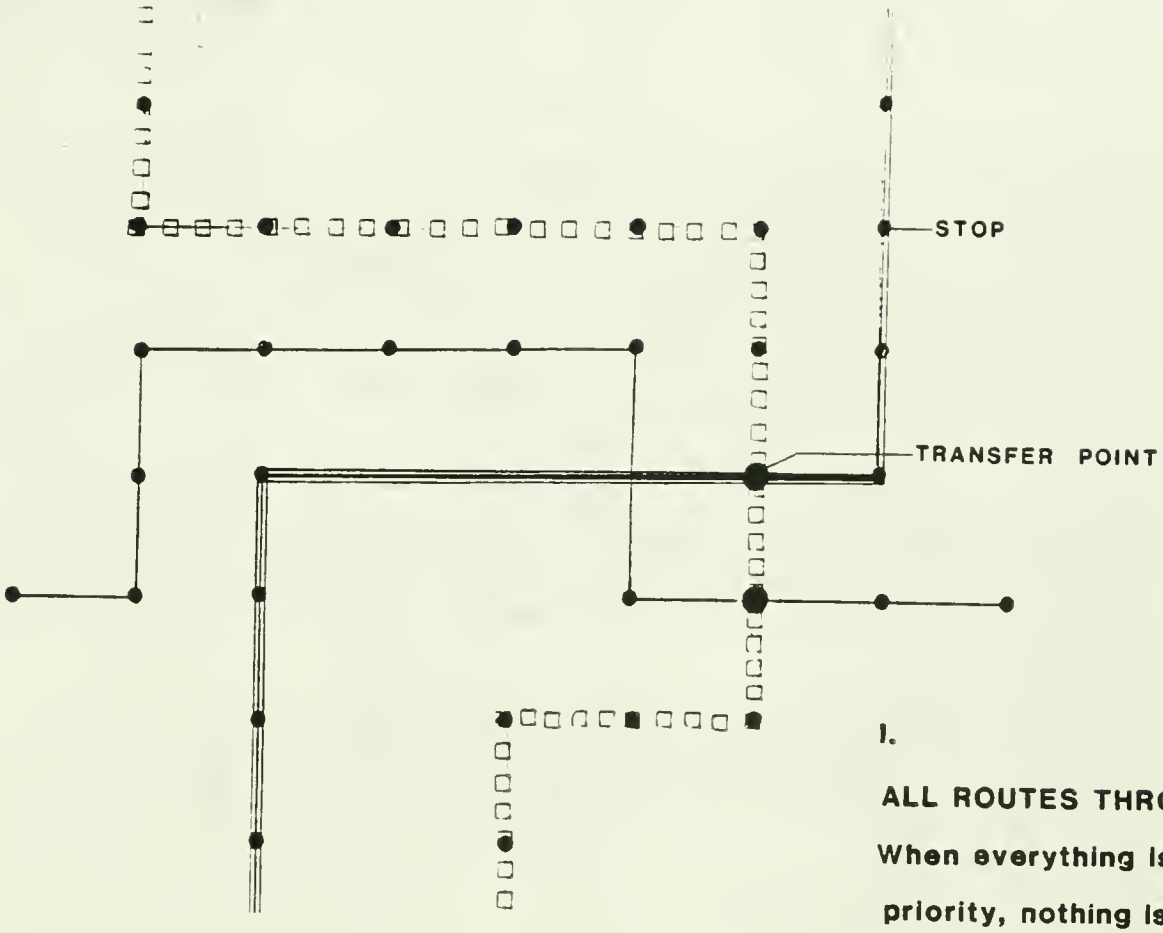
2. How might capacity increases be made on crosstown lines that would provide Chinatown residents with faster less crowded services?

3. Should some form of loop service within or surrounding Chinatown be created? Where should it go?

4. A study of a shallow transit subway on Stockton Street has been proposed in the Downtown Plan. How could this best serve Chinatown?

5. What are the implications of heavy transit use for land uses adjacent to transit route streets?

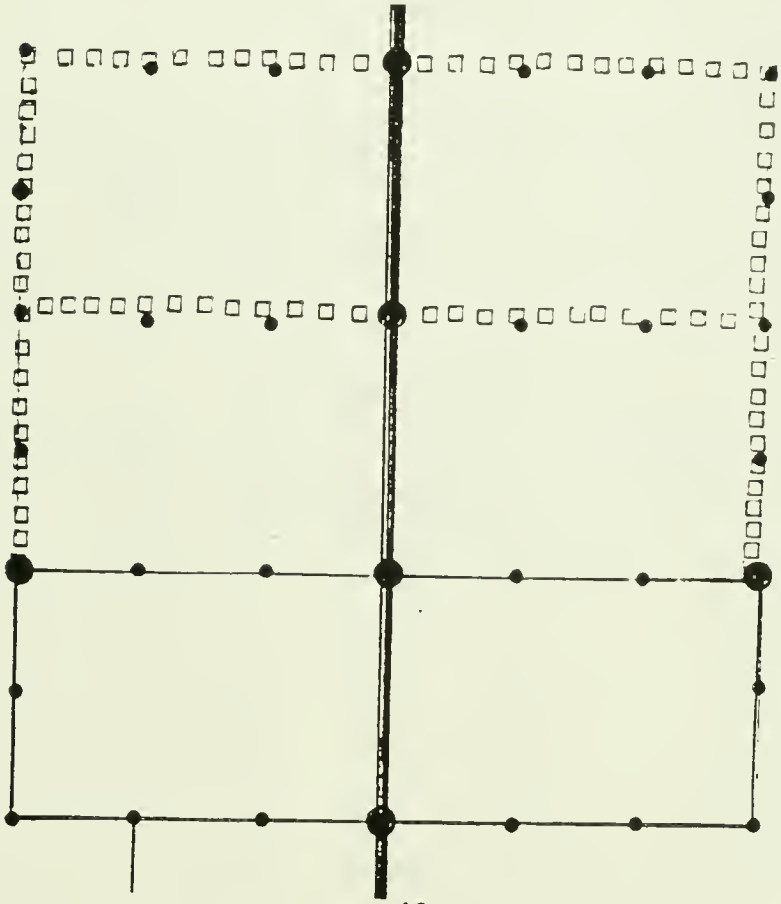




I.

ALL ROUTES THROUGH

When everything is a priority, nothing is a priority



II.

ONE THROUGH ROUTE (few stop)

Two Feeder-Local Route (many stop)

C. PARATRANSIT

Paratransit is generally defined as alternate transportation services for those who can't use regular mass transit, such as MUNI vehicles. Often paratransit clients are elderly and have physical handicaps. The San Francisco Public Utilities Commission funds approximately $1.6 million per year for paratransit services (Fiscal Year 1983-4).

In Chinatown, paratransit services are supplied by Self Help for the Elderly, On Lok, NEMS and a number of church groups. These agencies use specially equipped small vans.

Another paratransit resource is vouchers which are administered through the San Francisco Commission on Aging. Eligible clients can purchase voucher books good with cooperating private taxi services. In 1984, more than 3,000 people used paratransit services. Less than 2% of these, however, live in Chinatown. Table ? summarizes paratransit resources in Chinatown.

Paratransit services have been increasing in recent years and are an important addition to regular MUNI services for elderly and/or disabled residents of Chinatown. Table 2 summarizes paratransit resources in Chinatown. This system is working well. No alterations are suggested.

Jitney services ply along Mission Street but are not presently permitted in other parts of the City.

Policy Implications

1. Existing paratransit is working well.

2. Traditional transit is often crowded.

Paratransit Issues

1. Would jitney service add significantly to transit resources in Chinatown?

2. Should private bus services be included in certain forms of major new development?

TABLE 1

PARATRANSIT SERVICES IN CHINATOWN, 1984

NAME OF PROGRAM	SPONSOR	SOURCES & AMOUNT OF ANNUAL FUNDING	# OF VEHICLES AND SEATS	WHO IS SERVED
Senior Escort Service	Self Help For The Elderly	City & County	Public Transportation (MUNI) Or Taxi if Necessary	Elderly
On Lok	On Lok	Have Their Own Transp. System For 300 Patients Funded Through Medi - Care & Medi - Cal	Five Vans - Eight Seats Per Van	Elderly & Disabled
NEMS	NEMS	Support Services For Clientele Group Only	One Station Wagon	Low-Moderate Income And Eld./Disabled People Needing Mediacl Attention
Cameron House	Cameron House	Presbyterian Church $155,000 From Church	Two Vans	Only For Transporting Kids To Camp Retreats 6 - 7 Times A Year
Voucher System	Commision On Aging	PUC/Paratransit Broker Contract $7,000/$25,000 = $32,000	Vans Or Private Taxis	Elderly & Disabled

D. VEHICLE MOVEMENT

Daily vehicle traffic volumes for major streets were measured for the Tudor study in 1979 and are illustrated on Map 5. In several cases, more recent counts are available. Vehicle trips are related to both downtown-destined commuting and to origins and destination within Chinatown. Columbus, Broadway and Sacramento show considerable increases in traffic during commute peaks. Generally the four lane two directional peripheral streets are used more for through trips than the narrower interior streets.

Broadway is a four lane facility used by regional traffic feeding to the connection to Embarcadero Freeway or by traffic using the Broadway Tunnel to avoid hillier crossings to the north-western parts of the city. Restaurants and entertainment are major destinations on Broadway itself. The average daily traffic along Broadway was 30,000 in 1979. 1984 counts of east bound traffic going toward the Embarcadero freeways indicates an increase over the 1979 levels. The commute patterns of the street are indicated by the east bound peak (1,700 vehicles/hr in 1979) in the evening and the west bound peak (2,300 vehicles/hr in 1979) in the morning.

Columbus is a four lane through street which had 20,000 average trips per day in 1979. Recent counts indicate an increase. South of Broadway, there is a peak traffic period between 8 and 9 am. However in the evening, there is a substantial increase in traffic both north and south, probably reflecting the restaurant trade.

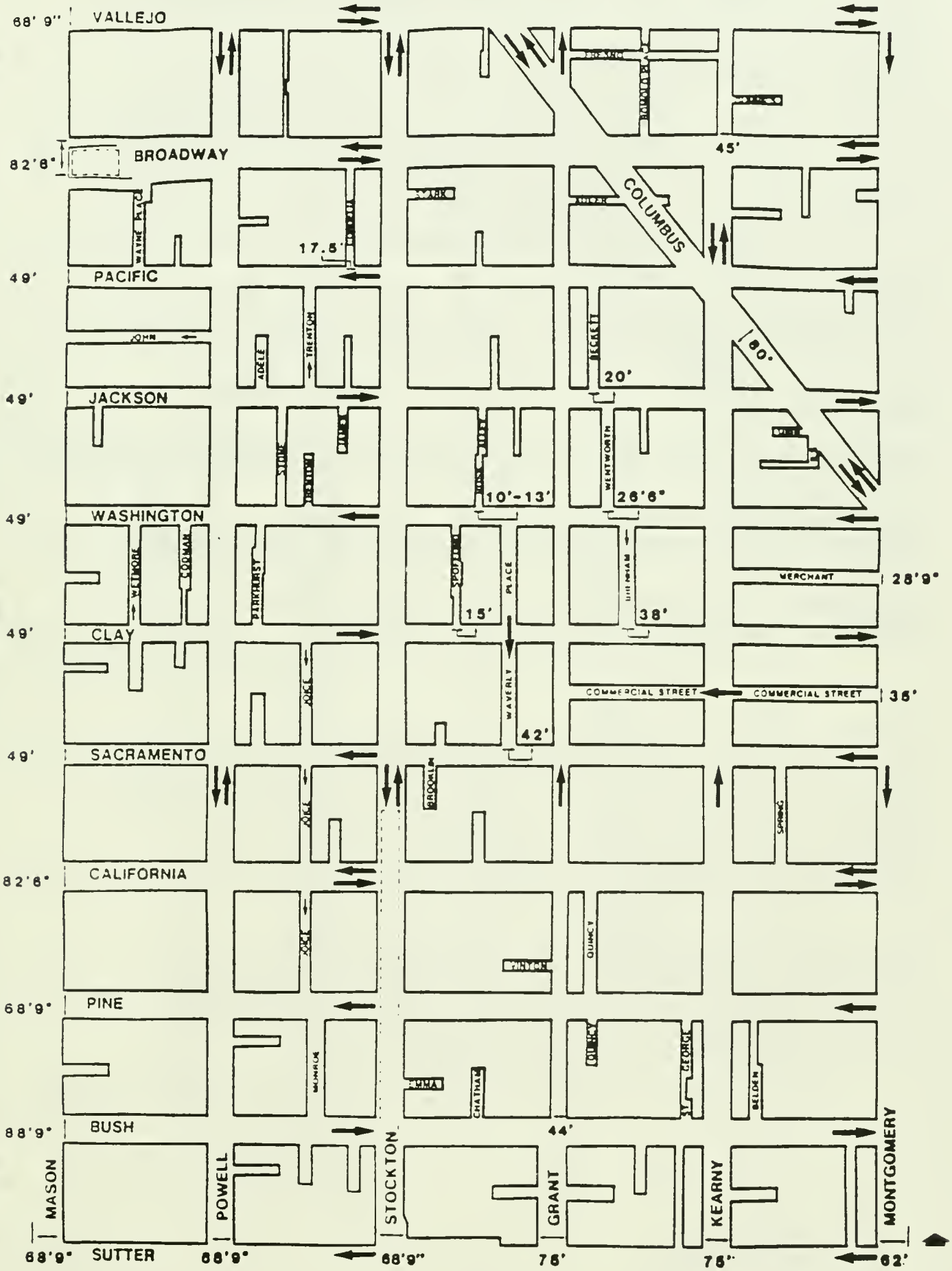
Kearny is one way throughfare steet for north bound traffic. In 1979, it had an average daily traffic volume of 15,000 vehicles. It serves about 1,000 cars per hour, with a peak between 5 and 7 pm.

North-South Streets

Grant Avenue has a single northbound traffic lane with turning lanes related to the one way east-west street pattern. Its continuity from Market Street to Union Square is broken by a forced right turn at Broadway. It serves souvenir stores, restaurants and a number of tourist-related businesses. The 1979 daily traffic was 5,000 vehicles, with a continuous flow of 200 to 300 vehicles per hour between 11 am. and 10 pm. Much of this traffic appears to involve windshield touring

Stockton is a major north-[illegible] four lane street with two-way traffic. It contains whosesale and [illegible] commercial uses serving both local and regional Chinese populati[illegible]. The average daily traffic was 12,500 in 1979. There is an increa[illegible] time during weekends. During both weekends and weekdays, the [illegible] amount of traffic occurs between 1 pm and 6 pm. There is a gene[illegible] of twice the number of southbound vehicles as those going n[illegible]

STREET-WIDTH & TRAFFIC DIRECTIONS IN CHINATOWN



Map 5

Powell is a two way street, but has a relatively low daily traffic volume of 5,000 vehicles. Cable cars travelling nine miles per hour share the street with cars. Powell has a steep grade south of California Street. The street contains housing and a more varied and dispersed pattern of commercial uses than either Stockton or Grant.

East-West Streets

Except for the major two way streets, Broadway and California, the hilly east-west streets of Chinatown have been made one-way. East-west trips through the Chinatown Core are discouraged by reversing one-way movements at Jackson and Washington Street at the cable car line on Powell.

Pacific is one way, west bound, through the study area. It has peak traffic during the weekday evening commute, but tends to have a relatively steady volume of traffic between 11 am. and 10 pm., indicating local traffic service. Weekend traffic is slightly increased.

Washington has one traffic lane is is one way westbound. It primarily serves local traffic.

Jackson, eastbound below Powell, is the location of many restaurants and seems to have a 7 pm to 9 pm dining-related peak of traffic volume.

Clay Street which is eastbound has no commute peak, but shares the other characteristics of Pacific. Sacramento which is westbound has a pttern similar to Pacific, with a downtown traffic commute peak in the evening.

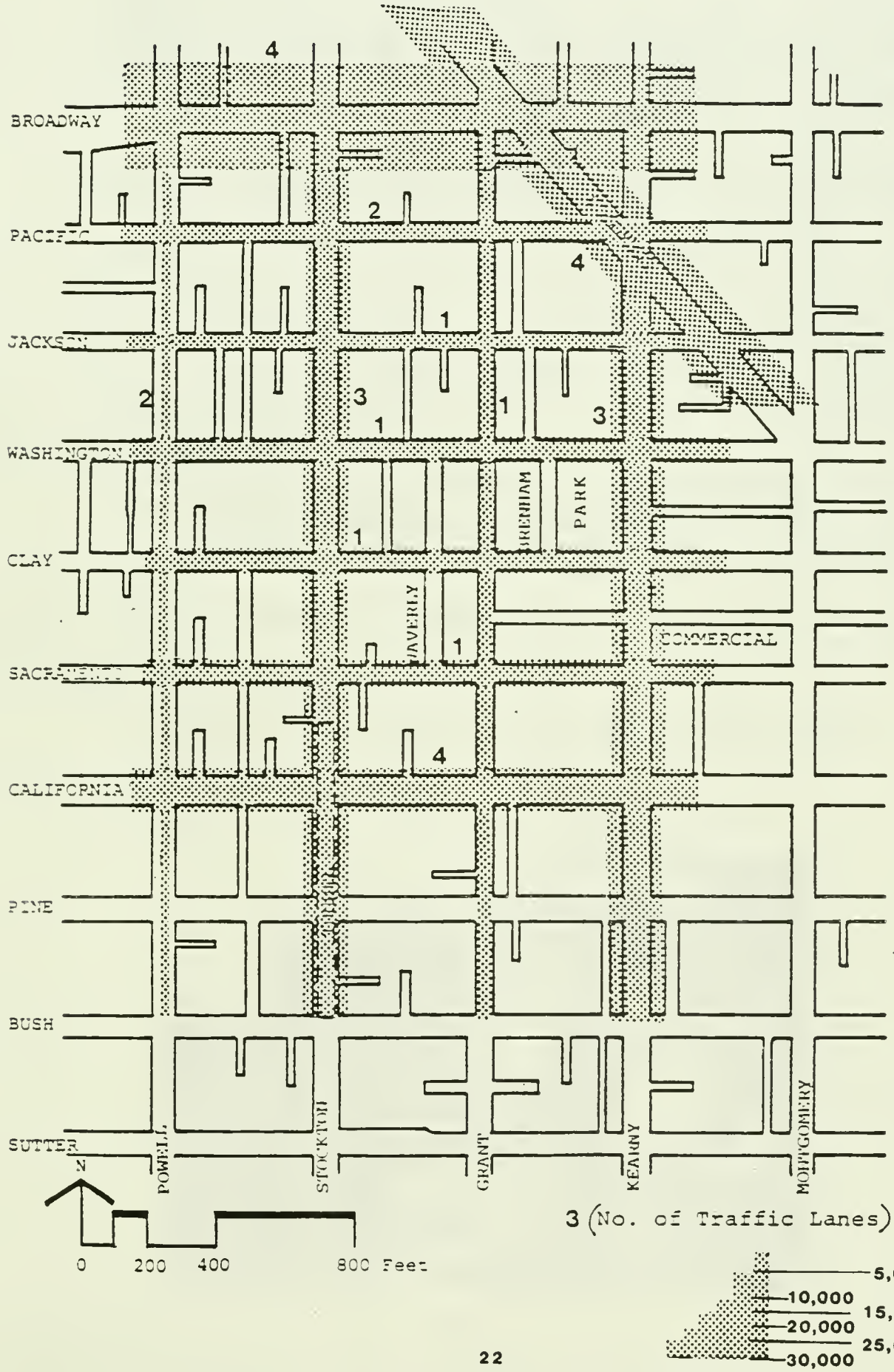
Sacramento has one traffic lane and is one way eastbound. It tends to become a peak hour thoroughfare for commuter traffic.

Summary

Vehicle operations in the study area can often be described as saturated flow, which denotes a stop-and-go situation and is considered to be the worst level of traffic service. It is therefore not uncommon to take ten minutes or longer to drive through the core area.. This happens on both weekdays and weekends. A major factor is the significant increase in pedestrians, causing additional traffic conflicts and delays and midblocks, intersections and alleys. Another factor is motorists in search of parking.

The diversity of transportation vehicular needs has created several problems requiring resolution: (1) morning peak through traffic to the central district conflicts with local truck loading (2) evening peak through traffic conflicts with pedestrian and local vehicular traffic (3) private vehicles conflict with transit movement throughout the day on certain transit oriented streets (discussed earlier).

DAILY VEHICLE VOLUMES
CHINATOWN VICINITY, 1979



Map 6

Policy Implications

1. Broadway and Columbus are the most heavily utilized streets and appear to be reaching capacity during peak commute hours and providing a poor level of service at certain intersections.

2. Stockton has lower traffic volumes, but often has blocked intersections at peak commute or shopping times.

3. East-west Streets, even with low volumes and reverse one-way patterns have stacking and blockages, often due to double parking.

4. Traffic congestion contributes to noise and air pollution affecting residents of Chinatown.

Vehicle Movement Issues

1. Are some major traffic pattern changes desirable?

2. Are there some east-west streets from which automobile traffic should be diverted?

3. Should Chinatown become a protected precinct with through east-west traffic directed to Broadway or to the Pine - Bush couplet and north-south traffic directed primarily to Montgomery and Kearny? This would leave Stockton Street primarily for pedestrians, commercial vehicles and transit.

4. Should automobile traffic be banned on Grant Ave. during certain hours?

Commercial Vehicles and Goods Movement Most of Chinatown's 1,300 businesses require deliveries. The meat, fish and produce businesses concentrated in the vicinity of Stockton and Broadway have the highest volume and frequency of deliveries. Curb lane loading often conflicts with transit in the northern portion of Stockton Street, especially in the early morning hours. About half of the 1,000 curb spaces in the study area are marked for short term (less than one hour) use.

Continuing problems in movement and delivery of commercial goods are: (1) congested traffic (2) scarcity of curb loading spaces (3) illegal parking in existing loading spaces.

A potential solution for goods delivery -- consolidated delivery or warehousing -- may not be cost effective when there are many individual small businesses. Presently, there is no public entity to study or effectuate this solution, especially in conjunction with the gradual rebuilding and renovation of Chinatown. It has been successfully applied to various retailing in Manhattan. Timing of deliveries to off-peak periods, coupled with better enforcement, was a recommendation of the 1979 Core Circulation study.

Policy Implications

1. Commercial vehicle movement is vital to business in Chinatown.

2. Sometimes commercial vehicles conflict with transit and other vehicle movement.

3. Merchant cooperation is needed for a workable solution.

Goods Movement Issues

1. Is there any merchant support for better coordination of timing of deliveries to off hour peaks or for some form of consolidated delivery or warehousing?

2. Are some further City regulations of loading justified?

E. PARKING

Parking space is scarce in Chinatown. Commercial projects in Chinatown have historically not required inclusion of any parking. The southern part of the Chinatown Core Area which has been regulated under a downtown zoning district (C-3-G) has been exempt from off-street parking requirements. The reasons for this exemption, as cited in the Planning Code, include: existing traffic congestion; accessibility by public transit; existing public parking facilities. In the northern part of the Chinatown Core, commercial development on lots smaller than 20,000 sq. ft. has also been exempted from parking through the "Washington Broadway Special Use District". This district was created for similar reasons, but also in explicit recognition of the desirability of "retention and conversion of many existing buildings of established character".

In spite of exemption from parking for new commercial projects in Chinatown, new residential uses have required one parking space per residential unit under San Francisco's zoning regulations except for housing for the elderly.

Off Street Parking Off street parking in the Chinatown vicinity is provided through the San Francisco Parking Authority in the Vallejo-Stockton, Portsmouth Square, St. Mary's Square and the Sutter-Stockton garages and a number of private garages and lots. Approximately half of the total off street parking space are publicly owned.

Although the off street parking supply has increased by 340 spaces in the last five years, waiting lines around parking facilities continue to adversely affect traffic and transit circulations. This is particularly true at the entry to Portsmouth Square garage. The prices of parking have almost doubled in five years. The prices of the publicly owned parking facilities are generally lower than those which are privately owned. Public garage operators report lots reach capacity daily, generally during 12 - 2 pm.

The area of most critical need is for shoppers and visitors. Shuttle bus systems for satellite lots and garages beyond easy walking distances were advocated in the 1979 study. This seems to be the most direct and economical solution for periods of peak need. A 1981-82 attempt to link free MUNI trolley service from the Sutter Stockton garage to Chinatown on Sundays was not very successful. Factors contributing to low use of this free service for paying patrons of the garage included the lack of publicity given the program and the competition from free weekend parking provided by the Embarcadero Center.

On Street Parking The number of available on street parking spaces in the study area has remained fairly consistent between 1979 and 1984. About 54% of street spaces are metered, 35% of street spaces are specifically designated for commercial delivery and the remaining 11% have other restrictions. Parking metering is considered to increase parking turnover.

When 1979 and 1984 parking on each block in terms of legal spaces available and the number of spaces (legal and illegal) actually used were compared, the proportion of illegal parking decreased significantly. Only about 7% of parked cars were observed in non-legal spaces in 1984.

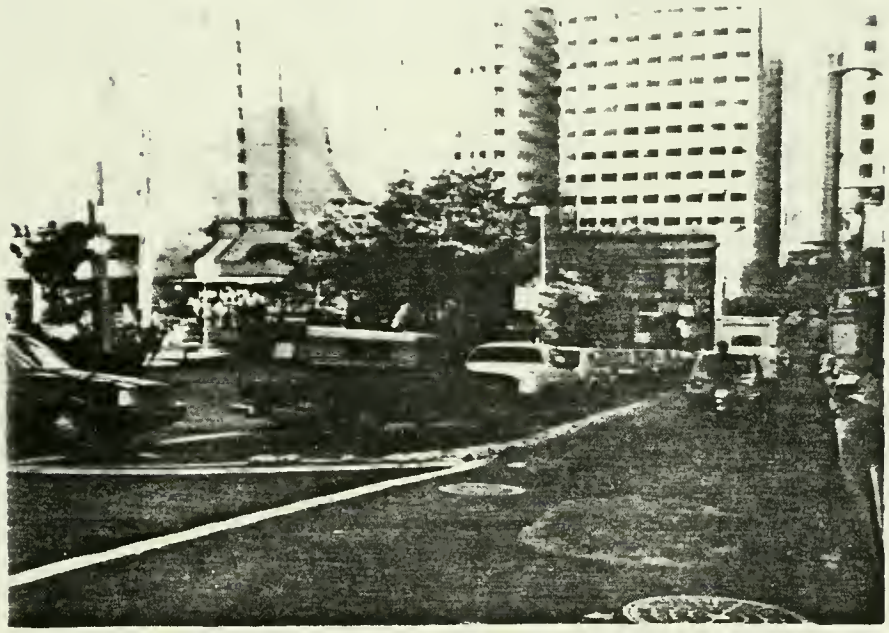
Illegal parking appears to be diminishing but during the weekends

TABLE 2

SUMMARY OF ON AND OFF STREET PARKING SPACES IN CHINATOWN VICINITY, 1979 & 1984

	1979	1984
Lots and Garages (open to public)	5,903	5,907
New Lots and Garages (open to public)		304
Private Lots and Garages (for institutions, etc.)		674
On Street Parking Spaces	875	897
TOTAL	6,778	7,818

Source: Department of City Planning Survey



Policy Implications

1. Parking facilities often reach capacity at midday.

2. Standing lines of cars interfere with traffic and transit operation and lower the air quality near two out of three Chinatown parks which also serve as parking facilities. problem: queues

3. Sites for additional major parking facilities in Chinatown are severely limited because of cost and access factors.

4. There appears to be some opportunity for improvement in information provided for and management of existing parking facilities.

Commercial Parking Issues

1. How should parking requirements be treated for commercial activities in new Chinatown zoning?

2. Should new zoning continue to not require parking for commercial development?

3. What can be done to improve the operation of public garages?

4. Should parking be metered on evenings and Sundays?

Residential Parking Residential parking patterns for new housing are exemplified in two large residential projects in Chinatown. The Mandarin Tower project consists of condominiums for upper income households and Mei Lun Yuen project has rental units for lower income households. In Mei Lun Yuen, 56 spaces are available but only 12 are used. In Mandarin Towers, there is no on-site parking, but 10% of the residents rent parking nearby for an average reported cost of $150 per month.

Policy Implications for Residential Parking

1. Low use of parking combined with very low car ownership patterns of Chinatown residents in older housing, indicate that a much reduced parking requirement is appropriate for both subsidized and market rate housing.

2. The existing one-to-one residential parking standard is in excess of current need and is a deterrent to development of new housing.

Residential Parking Issues

1. How should residential parking requirements be treated in new Chinatown zoning?

2. Should non market rate (subsidized) housing have much lower requirements than market rate housing?

3. Should off site residential parking be encouraged?

TABLE 3

COMPARISON OF NUMBER OF TRANSFERS FOR CHINATOWN AND DOWNTOWN EMPLOYEES WHO USED TRANSIT

NUMBER OF TRANSFERS	CHINATOWN	DOWNTOWN
None	35	44
One	40	49
Two	16	6
Three or more	9	1

Source: Department of City Planning Chinatown Survey, 1984

TABLE 4

COMPARISON OF TIME SPENT GETTING TO WORK BY CHINATOWN AND DOWNTOWN EMPLOYEES

TIME	CHINATOWN	DOWNTOWN
15 minutes or less	36 %	10 %
16 - 30 minutes	36	39
31 - 45 minutes	14	27
46 - 60 minutes	12	18
More than one hour	2	6

Source: Department of City Planning Chinatown Survey, 1984

IV. TRANSPORTATION NEEDS OF PEOPLE IN CHINATOWN

A. EMPLOYEES

There are approximately twice as many people who work in the Chinatown Core (20,000) as those who are residents (10,000), with some overlapping. In August of 1984, a telephone sample survey of Chinatown employees was conducted by the Department of City Planning to identify residential and commuting characteristics of Chinatown's working population. The recently completed environmental impact report for the Downtown Plan provides similar survey information for employees in Downtown.

According to the DCP telephone survey findings, employees in Chinatown are much more likely to live within San Francisco (84% vs. 53%) than those employees in Downtown. Of those Chinatown employees living in San Francisco about a third live in or near Chinatown in the northeast section of San Francisco.

Given this finding, it is surprising that about 35% of those working in Chinatown say that they use an automobile to get to work. The average cost of parking for those who drive is reported to be a modest $4 per day, much lower than costs generally charged for public off-street parking in and near Chinatown ($10 to $12 per day). Some form of barter is implied by these comparatively low prices.

In Chinatown, 40% of the employees used transit, compared to Downtown's 55%, but about 25% of Chinatown employees walk to work. Of the transit users, about 2/3 report that they need to transfer at least once. Overall, Chinatown employees report they average a little less than 1/2 hour in getting to or returning from work -- not an unusual amount of time for a commute.

When asked about commuting problems, the walkers-to-work said they had no problems. The drivers said more parking was needed. Creation of additional long term commuter parking, however, would be in conflict with Master Plan policies, and the past reduction or elimination of commercial parking requirements in Chinatown zoning.

<u>Policy Implications</u>

1. A greater proportion of Chinatown employees drive to work alone than Downtown employees.

2. Of transit users, more Chinatown employees transfer than downtown employees.

3. Chinatown employees have [illegible] direct service from neighborhoods where they live than downtown [illegible] have from their neighborhoods.

4. Workers are using up [illegible] available off street parking capacity urgently needed by [illegible].

5. Transportation broker [illegible] programs have been used successfully in major downtown offi[illegible].

TABLE 5

COMPARISON OF RESIDENCE CHINATOWN AND DOWNTOWN EMPLOYEES

Place of Residence:	CHINATOWN EMPLOYEES %	DOWNTOWN EMPLOYEES %
Live N.W. Section of San Francisco	19 %	17 %
Live N.E. Section of San Francisco	33	7
Live S.W. Section of San Francisco	25	21
Live S.E. Section of San Francisco	7	8
Live Outside San Francisco	16	47

Source: Department of City Planning Chinatown Survey, 1984
Downtown Plan EIR

TABLE 6

COMPARISON OF HOW CHINATOWN AND DOWNTOWN EMPLOYEES GET TO WORK

MODE	CHINATOWN	DOWNTOWN
Drive Own Car (no passengers)	28 %	17 %
Carpool (2 Or More Person)	6	15
Vanpool	1	2
Walk	26	5
BART	8	17
Other Public Transit	1	15
Muni	31	28
Other		1

Source: Department of City Planning Chinatown Survey, 1984
Downtown Plan EIR

Chinatown Employee Issues

1. Should MUNI direct transit service to Chinatown be increased from the Southwest and Northwest (Sunset and Richmond) districts?

2. How, given many small businesses, can ride sharing and transit use through a transportation broker program be increased? Which institutions or organizations could assist?

B. VISITORS AND SHOPPERS

A recent Saturday survey provides some insights on visitors and shoppers.

TABLE 7

CHINATOWN SHOPPER SURVEY
Saturday Dec 17, 1983

Mode of Travel to Chinatown:		
Drive car	17.0%	
Ride in car	30.0	
Ride Muni	32.0	
Walk	10.0	
Other	2.0	
Live in Chinatown		9.0%
TOTAL	100.0%	
Areas of Residence:		
San Francisco	65.0%	
South Bay	17.0	
East Bay	6.0	
North Bay	4.0	
Outside Bay Area		8.0%
TOTAL	100.0	
Number of Stores Visited That Day:		
One	4.0	
Two	9.0	
Three	13.0	
Four	26.0	
Five	17.0	
Six or More	31.0	
TOTAL	100.0	

Source: DKS Associates

Policy Implications

1. Saturday is the busiest shopping day of the week with the highest volume of activity from 10 am to 4 pm.

2. The average shopper goes to five different stores per visit, resulting in the need to carry lots of bags and parcels.

3. About 19% of shopper arrive on foot; about 1/3 use transit; nearly half come in cars with vehicle occupancy of about three people per vehicle.

4. About peak times, there is a shortage of several hundred to a thousand parking spaces. (Chinatown workers are using about 3,000 spaces of available supply).

5. Many cars criuse looking for parking spaces or simply drive around slowly while passengers shop.

6. Increasing the supply of parking would probably still lead to a similar shortfall in parking and traffic capacity is already strained.

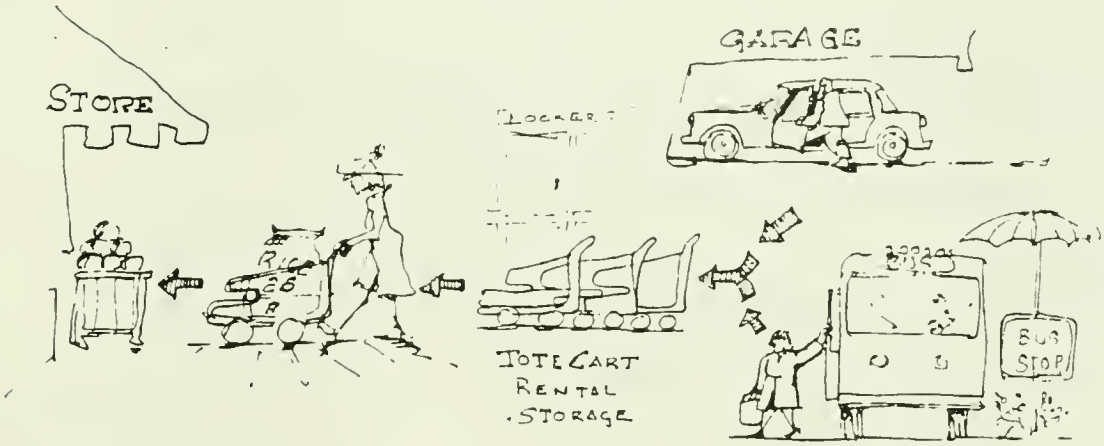
Visitor/Shopper Issues

1. How can access for weekend shoppers and visitors be improved when they tend to travel in large groups, carry a number of parcels and come from a greater distance than they do during the week?

2. Is some form of parcel delivery service feasible?

3. Would shopping cart rentals or courtesy loans from parking garages be workable or would they further crowd the congested sidewalks?

4. Can Chinatown employees cooperate in lowering their parking use on Saturdays?



C. RESIDENTS

As indicated in an earlier Issue Paper, very few Chinatown residents own or drive automobiles. Only 14% of the working population drive a car to work. Walking is the primary means of transportation for over half of the people who work. However, many of Chinatown's residents, particularly the elderly, are not in the labor force.

Policy Implications

1. Residents are heavy users of pedestrian spaces and transit.

2. Existing residents generally do not require parking facilities.

Pedestrian Issues

1. How can residents be more protected from traffic impacts?

2. What are some ways to buffer residential development from traffic?

D. SAFETY

Study of reported accidents over the last five years in the Chinatown area shows a relatively steady pattern with a decline in 1983. 1983 had fewer reported accidents, but the proportion of injuries has increased.

REPORTED ACCIDENTS IN CHINATOWN AREA, 1979-83

Year	Injury	Non Inj.	Total
1979	60	229	289
1980	55	268	323
1981	42	257	299
1982	43	257	300
1983	48	174	222

Source: Department of Public Works records from Police Reports.

Policy Implications

1. Comparatively, these safety figures are better than Downtown?

2. There is always room for improvement.

Safety Issue

1. How can the streets be made safer?

2. How can the injury rate be lowered?

V POLICY DIRECTIONS

1. Pedestrians

- Improve pedestrian access and amenity.

  Emphasize pedestrian circulation connections and linkages.

- In the Alleyways program, provide environmental ennancement for adjoining uses, particularly those of a residential character.

  Limit and restrict auto use and parking on alleyways to gain maximum benefits from improvements and beautification.

  Improve pedestrian amenity by providing special pavement, greenery, seating and bollards.

  Provide a regular City maintenance program.

- Maintain an adequate amount of effective sidewalk width on major shopping streets.

  Widen sidewalks at appropriate locations.

  Create arcades where possible.

  Remove unnecessary sidewalk obstacles and enforce sidewalk display regulations.

- Recognize the importance of sunlight protection for high volume pedestrian streets and congregating areas.

2. Transit

- Continue to improve transit services for Chinatown.

  Provide transit services with origins in Chinatown.

  Consider a loop route within Chinatown.

  Provide more frequent transit services on weekends.

  Improve transit signage and create bilingual signs for transit lines serving or connecting to Chinatown.

  Provide bus passenger loading platforms and queuing railing at appropriate locations.

  Provide free [illegible] or shuttle services for those who park in designated [illegible] parking garages.

- Explore and implement [illegible] treatment for transit service.

- Support exploration [illegible] low subway concept for transit on Stockton Corridor.

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3. Paratransit

- Maintain the existing, high quality programs.
- Explore the possibility of jitney service to and from Chinatown.

4. Transportation System Management

- Develop transportation brokerage services for Chinatown employees, possibly focusing on different occupational groups in Chinatown such as restaurant employees, retail sales employees, etc.

  Emphasize critical need for shopper/visitor parking on Saturdays and encourage Chinatown employees to use alternative transportation on Saturdays.

5. Goods Movement

- Recognize sidewalk and truck vending as a traditional part of Chinatown and study opportunities for some consolidation of activities.
- Encourage consolidation of freight deliveries.
- Increase nighttime deliveries to produce greater efficiency and reduce congestion.

6. Vehicle Movement

- Continue measures to discourage commuter and east-west traffic in Chinatown.

  Consider a through traffic bypass system to the east of Chinatown.

- Improve traffic circulation and directional signage to indicate through and non-through routes, and parking facilities.
- Strengthen Stockton Street's accessibility for transit and local goods.

  Explore the possibility of peak period towaways on Stockton Street.

- Improve traffic channelization around the Portsmouth Square garage.

7. Parking

- Continue to make more effective use of existing parking.

  Provide more parking enforcement on weekends.

  Explore operation of parking metering on Sundays and holidays.

  Explore possiblity of replacing restricted zone parking with parking meters.

  Consider use of attendant parking in existing parking garages to increase their capacities.

  Design parking rates to encourage short term parking and discourage all day parking.

  Consider providing tote cart rental stations in parking garages for shopping on Stockton and Grant Street commercial areas.

  Design signs and maps to indicate street directions, available parking and bus services.

- Continue to explore parking opportunities for Chinatown.

  Encourage future facilities to be located in mixed use structures in conjunction with other uses such as residences, commercial services or off-street goods loading and storage.

  For any new parking, consider accessible intercept parking on the northern or eastern fringes of Chinatown.

- Continue to exempt commercial development from parking requirements in Chinatown zoning.

  Consider reduced standards for parking in housing developments, particularly projects involving public subsidies.

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